



2012 International Fire Code

Significant Changes



IFC Background



Purpose

- To establish the minimum requirements regarding life safety and property protection
- To provide safety to fire fighters and emergency responders
- Reference document
- The go-to guide for fire safety



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Scope

- The hazard of fire and explosion
- Conditions hazardous to life and property
- Fire hazards based on occupancy type or operation
- Fire protection systems
- Building or processes affecting emergency responders



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Adoption/Enforcement

- Locality can choose to adopt and amend the IFC
- Section 101.1 includes language specifically for the local jurisdiction to insert its name into the document
- Locality can adopt/amend in whole or in part
 - Responsibility to know and comply [§109.2]
 - Owner
 - Owner's Rep
 - Occupant
 - Designer

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Organization

- Part I – Administrative
- Part II – General Safety
- Part III – Building & Equipment
- Part IV – Special Occupancies
- Part V – Hazardous Materials
- Part VI – Referenced Standards
- Part VII - Appendices

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Part I - Administration

Scope

- Does it apply to your issue?
- Can it be enforced for your issue?



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Part I – Administration

Is it adopted locally?

<http://www.baltimorecity.gov/>

- Building, Fire and Related Codes of Baltimore City
- IFC 2012 is listed in the Introductory Note with various other I-Codes



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§202 Definitions

Those listed are specific to the IFC

Seemingly minor issues matter in terms of how something is defined in the IFC

Definitions not listed?

- If defined in other I-Codes, use that
- Merriam Webster's Collegiate Dictionary, 11th Edition*

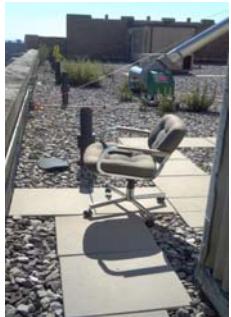
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§316.4 Roof Obstructions

- Roofs with slopes <30 degrees
- Minimum 7 ft above surface
OR
- Protect with 2-in. plastic pipe or fence



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Roof Obstructions



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§317 – Roof Gardens and Landscaped Roofs

- Must be installed and maintained in accordance with the IFC and §1505 and §1507.16 of the IBC
- Maximum sizes
 - 15,625 sq ft (1,450 sq m)
 - 125 ft (39 m)
 - Class A rated roof covering minimum 6 ft (1.8 m) wide between adjacent gardens and as border around equipment
- Maintenance Plan

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Roof Gardens and Landscaped Roofs

§506.1, §607.5 Elevator Service Keys

- ❑ Elevator keys must be standardized – uniform throughout jurisdiction, unless...
- ❑ Non-standardized fire service elevator keys
 - ❑ Box must be compatible with existing system used by FD
 - ❑ Mounted in the lobby at the lowest level of FD access; permitted to be at fire command center if approved by FD
 - ❑ ONLY for keys, unless specifically approved by FD for tools
- ❑ New requirements for Knox Boxes to comply with UL 1037, *The Standard of Safety for Antitheft Alarms and Devices*

The image shows an elevator control panel with several buttons and a red fire recall sign. The panel includes a red 'FIRE' button, a red 'EMERGENCY STOP' button, a grey 'UP' button, a grey 'DOWN' button, and a grey 'OPEN DOOR' button. To the right of the panel is a red rectangular sign with white text. The sign reads: 'FIRE FIGHTERS' OPERATION', 'TO RECALL ELEVATORS', 'FIRE KEY INDICATOR FOR', 'NORMAL OPERATION USE THIS KEY "00"', 'IS OFF', and 'FIRE'. The sign is mounted on a dark, textured wall.



§508.1.5 Fire Command Center

- Additional documentation required (new #13)
 - General building
 - Building emergency contact
 - Exit stair details
 - Building services and systems
 - Fire protection systems
 - Hazardous materials



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§510.1 Emergency Responder Radio Coverage



- ❑ All new buildings shall have *radio coverage*
- ❑ Exception where a wired communication system is approved by the fire code official



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§604.5 Emergency Lighting



- Monthly 30-second activation test
- Annual 90-minute power test
- Records must be kept on site

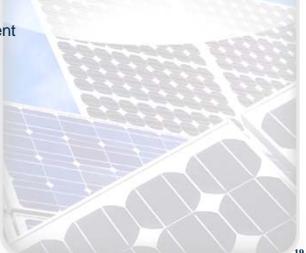


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§605.11 Solar Power

- Solar photovoltaic power systems on building roofs must now be installed per the IFC, IBC, and NFPA 70
- Requirements
 - Marking of all equipment
 - Equipment location
 - Access
 - Wiring
 - Maximum area



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§610 Cooking Oil Storage

- Recent practice to store and reuse oils
- Class IIIB combustible liquid
- Must use Listed tanks – UL 142 & UL 80
 - Steel
 - Welded liquid-tight
 - Spill control
 - Venting



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§803.5.2 Newly Introduced Textile Wall & Ceiling Coverings

- *Newly introduced*
- Textile or Expanded Vinyl wall and ceiling coverings
 - Class A flame spread when tested per ASTM E84 or UL 723
 - Must meet §803.5.1.2 when tested per NFPA 265
 - Must meet §803.1.2.1 when tested per NFPA 286



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§903.2.11.1.3 Basement Sprinkler Protection

- Basement modifications could require the addition of sprinkler system(s)
- Walls, partitions, or general obstruction preventing a hose stream from reaching the hazard
- Any portion greater than 75 ft from required exterior openings



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§904.1.1, §906.3 Certification of Service Personnel

- Service personnel must be certified by AHJ or other approved organization
- Fire extinguishers
- Automatic extinguishing systems (other than automatic sprinkler systems)



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§907.4.1 Fire Alarm Control Unit

- Fire alarm control panels must be protected via smoke detection at panel
- FACP
- NAC Panels
- Supervising Station transmitting equipment
- Heat detection permitted
- *Sprinkler exception deleted*



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§908.7 Carbon Monoxide Alarms



Required in Group I or R occupancies
 New and existing if provided with fuel-burning appliances or attached garages
 Few exceptions
 Compliance with:
 NFPA 720
 UL 2034
 Single station versus systems



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§1004.1.2 & Table 1004.1.2 Occupant Load Factor



Exhibit Galleries and Museums now separated from general assembly
 Clarification as to *function* of space rather than overall Use Group or Occupancy

Assembly gaming floors:
 11 gross
 Museums:
 30 net
 Malls:
 Refer to Section 402.4.1

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§1005.3 Egress Capacity Factor



Stairways
 0.3 inches per person
 Exception allows reduction to 0.2 in./person if:

- Automatic sprinklers provided
- Fire alarm with voice evacuation

Level, Ramps, etc.
 0.2 inches per person
 Exception allows reduction to 0.15 in./person if:

- Automatic sprinklers provided
- Fire alarm with voice evacuation

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§1008.1.2 Door Swing

□ Doors... serving a room or area containing an occupant load of 50 or more...



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Door Swing



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§1009 Stairways

□ Clarification of terms for consistency – see §202 for definitions

□ Exit stairways are required to be enclosed per §1009.2.2

□ Exit access stairways are permitted to be open per §1009.3



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Stairways



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§1022.5 Membrane Penetrations of Interior Exit Stairways

- Membrane (single surface) penetrations now permitted where properly sealed
- Through-penetrations are still prohibited, except for specific equipment serving stairway
 - Sprinkler
 - Fire alarm



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§1101 Existing Buildings

- Intent – provide *minimum requirements* for fire and life safety to occupants in existing buildings
- Clarifications in wording to align with IEBC and Chapter 34 of the IBC
- No longer requires a life safety evaluation for existing buildings to comply with Chapter 11

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§1104.16.5.1 Fire Escape



- Existing are permitted to remain
- Examination by registered design professional or others acceptable to the AHJ required every five years
 - Structural adequacy
 - General safety

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Fire Escape – Acceptable?



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Fire Escape – Acceptable?



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Hazardous Materials

□ Chapters 50 through 67 (68-79 reserved)

- Storage
- Handling
- Use
- Dispensing

□ Physical or health hazards are addressed in the IFC

□ Combustible dusts added in this revision cycle

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Hazardous Materials Storage



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**\$202, Table 5003.1
Combustible Dusts**

□ Combustible dusts are regulated where they are

- Manufactured
- Generated
- Used

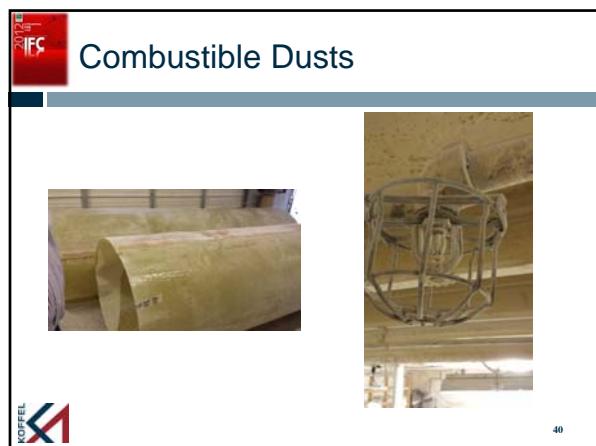
□ Relative to concentration and conditions as regulated in IBC §414.1.3

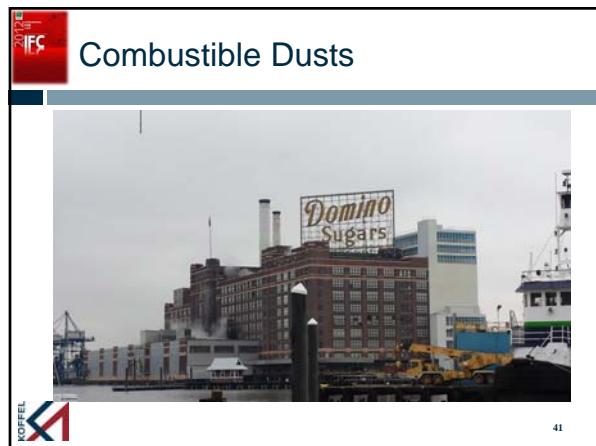
□ Maximum Allowable Quantity (MAQ) per Control Area

- Limits for materials in storage and in use
- Per Control Area
- Group H-2 if MAQ is exceeded

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\$5705.5 Alcohol-Based Hand Rubs (ABHR)

- Now permitted to be 95% (formerly limited to 70% by volume ethanol or isopropanol)
- Class I or Class II liquid
- Mounting regulations
- Aggregate storage limits

